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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/647,059 | 08/22/2003 | Mark H. Crane | 0717.2037-001 | 9713 |
| 21005 | 7590 | 03/07/2006 | EXAMINER | |
| HAMILTON, BROOK, SMITH & REYNOLDS, P.C. | | | PIZIALI, JEFFREY J | |
| 530 VIRGINIA ROAD | | | ART UNIT | |
| P.O. BOX 9133 | | | PAPER NUMBER | |
| CONCORD, MA 01742-9133 | | | 2673 | |

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/647,059 | CRANE ET AL. | |
| | Examiner | Art Unit | |
| | Jeff Piziali | 2673 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2/6/04</u> . | 6) <input type="checkbox"/> Other: _____ |

✓

DETAILED ACTION

Drawings

1. The drawings were received on 6 February 2004. These drawings are acceptable.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5, 7, 10, 15, 17, and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The term "about optical infinity" in claims 5 and 15 is a relative term which renders the claims indefinite. The term "about optical infinity" is not defined by either claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It would be unclear to one having ordinary skill in the art precisely how close to optical infinity the focus must be before constituting "about optical infinity."

5. The term "generally circular portion" in claims 7, 10, 17, and 20 is a relative term which renders the claims indefinite. The term "generally circular portion" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of

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ordinary skill in the art would not be reasonably apprised of the scope of the invention. It would be unclear to one having ordinary skill in the art precisely how near to circular a member portion must be before constituting "generally circular."

6. Claims 8 and 18 are rejected under 35 U.S.C. 112, second paragraph, simply for being dependent upon rejected base claims.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ichikawa et al (US 5,266,930 A).

Regarding claim 1, Ichikawa discloses a headgear system comprising: headgear [Fig. 1; 5] with an upper headgear portion for being worn on a user's head and a lower headgear portion extending from the upper headgear portion for extending forwardly relative to a lower front portion of the user's head and below the user's eyes (see Fig. 1; Column 8, Lines 6-59); and a display assembly [Fig. 1; 11] mounted to the lower headgear portion for being located below at least one of the user's eyes so as not to obstruct the user's vision (see Column 8, Line 60 - Column 9, Line 9), the display assembly having a display that is visible when said at least one of the user's eyes looks downwardly (see Fig. 1), the display assembly being configured to be

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adjustable by the user while the headgear system is worn by the user for changing the orientation of the display (see Column 9, Lines 10-58).

Regarding claim 2, Ichikawa discloses the headgear is a helmet [Fig. 1; 5], and the lower headgear portion is a face bar (see Fig. 1; Column 8, Lines 6-14).

Regarding claim 3, Ichikawa discloses the display assembly includes at least one rotatable joint [Fig. 2; 21] having frictional resistance so that the joint remains in a particular orientation until moved by the user (see Column 9, Lines 28-58).

Regarding claim 4, Ichikawa discloses the display is sized for viewing by one of the user's eyes when said one of the user's eyes looks downwardly (see Fig. 1; Column 8, Lines 6-14).

Regarding claim 5, Ichikawa discloses the display displays images which are focused at about optical infinity (see Fig. 1; Column 8, Lines 6-14).

Regarding claim 6, Ichikawa discloses the display assembly has a rotatable horizontal axis for allowing the display to be tilted upwardly and downwardly, and a rotatable vertical axis for allowing the display to be tilted side to side, relative to the user's head (see Figs. 2 & 3; Column 9, Lines 10-22).

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Regarding claim 7, Ichikawa discloses the display assembly comprises: a base [Fig. 2; 16] for mounting to the face bar of the helmet, the base having a circular recess that is connected to an entrance slot (see Fig. 4); a rotatable member [Fig. 4; 19] having a generally circular portion that has a snap fit into the circular recess of the base through the entrance slot, the rotatable member being rotatable within the circular recess about the vertical axis; and two side members [Fig. 2; 17] extending from the rotatable member, the display being rotatably mounted between the side members along the horizontal axis (see Column 9, Lines 10-58).

Regarding claim 8, Ichikawa discloses the display assembly [Figs. 32 & 34; 737] is mounted to the face bar of the helmet for being below a first eye [Figs. 32 & 34; E_R] of the user, the headgear system further comprising a second base [Figs. 32 & 34; 738] mounted to the face bar of the helmet for being below a second eye [Figs. 32 & 34; E_L] of the user to allow the user to select the position of at least one display by snap fitting an associated rotatable member into the desired base (see Column 8, Lines 3-14 & 40-61; as well as Column 19, Lines 9-17).

Regarding claim 9, this claim is rejected by the reasoning applied in rejecting claims 1 and 6.

Regarding claim 10, this claim is rejected by the reasoning applied in rejecting claim 7.

Regarding claim 11, this claim is rejected by the reasoning applied in rejecting claim 1.

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Regarding claim 12, this claim is rejected by the reasoning applied in rejecting claim 2.

Regarding claim 13, this claim is rejected by the reasoning applied in rejecting claim 3.

Regarding claim 14, this claim is rejected by the reasoning applied in rejecting claim 4.

Regarding claim 15, this claim is rejected by the reasoning applied in rejecting claim 5.

Regarding claim 16, this claim is rejected by the reasoning applied in rejecting claim 6.

Regarding claim 17, this claim is rejected by the reasoning applied in rejecting claim 7.

Regarding claim 18, this claim is rejected by the reasoning applied in rejecting claim 8.

Regarding claim 19, this claim is rejected by the reasoning applied in rejecting claims 1 and 6.

Regarding claim 20, this claim is rejected by the reasoning applied in rejecting claim 7.

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Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Massof et al (US 6,529,331 B2), Beautz (US 6,487,786 B2), Chen et al (US 6,462,882 B2), Amafuji et al (US 6,359,602 B1), Robertson et al (US 6,034,653 A), Shih et al (US 5,856,811 A), Banbury (US 5,646,783 A), Kelly (US 5,406,415 A), and Hori et al (US 5,072,209 A) are cited to further evidence the state of the art pertaining to headgear systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J.P.
2 March 2006



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